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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,169	11/27/2000	David H Sitrick	STD 1684	4193

20787 7590 06/04/2003

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SKOKIE, IL 60077

EXAMINER

BECKER, SHAWN M

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 06/04/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/723,169

Applicant(s)

SITRICK, DAVID H

Examiner

Shawn M. Becker

Art Unit

2173

-- Th MAILING DATE of this communication appears on th cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 46-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 46-55 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-45, drawn to an audiovisual presentation that replaces selected reference portions with replacement objects, classified in class 345, subclass 716.
  - II. Claims 46-55, drawn to a video processing system, classified in class 345, subclass 419-475.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as producing an audiovisual presentation that substitutes images without requiring the particular video processing in invention II. The video processing of invention I could be carried out by other means than those described in invention II. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Art Unit: 2173

5. During a telephone conversation with Attorney David Sitrick on 5/22/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-45. Affirmation of this election must be made by applicant in replying to this Office action. Claims 46-55 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Drawings*

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the reference numerals in Fig. 12 are in the 1100s, but starting with the paragraph on line 6 of page 40, the items in Fig. 12 are described with reference numerals in the 1200s. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1- are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent No. 6,504,546 to Cosatto et al. (hereinafter Cosatto).

Referring to claims 1, 26, and 37, Cosatto discloses a system and method for producing an integrated display audiovisual presentation with a source of first audiovisual presentation. See col. 3, lines 34-53, which describe how video is taken of a model along with an audio track. The first audiovisual presentation comprises at least one reference point and at least one reference object, wherein at least a selected one reference point is associated with a location on a selected one reference object. See col. 5, lines 25-40, which describe how facial parts are associated with their appropriate location on the face.

Cosatto discloses a source of user audiovisual information, wherein the user audiovisual information comprises at least one replacement point and at least one replacement object image, wherein at least a selected one replacement point is associated with a location on a selected replacement object image. See col. 5, lines 41-64, which describe how bitmap images from recorded video (user audiovisual information) are used replace parts of the face (replacement parts) at an appropriate location on a face.

Cosatto discloses correlation means responsive to the first audiovisual presentation and the user audiovisual information, for correlating at least one selected reference point (location of facial features) with at least one selected replacement point (facial features) and association means responsive to the correlation means, for associating a selected one reference object (i.e. mouth) with a selected one replacement object image (i.e. new mouth bitmap). See col. 3, lines 34-53, col. 4, lines 30-43, and Figs. 1-7.

Cosatto discloses compositing means responsive to the first audiovisual presentation, the user audiovisual information, the association means, and the correlation means, for compositing at least one replacement object image with the first audiovisual presentation, producing an

Art Unit: 2173

integrated display audiovisual presentation, wherein at least a selected portion of the replacement object image replaces a selected portion of the first audiovisual presentation. See Fig. 7, which shows facial features integrated into a separate base face, replacing the previous facial features. Also, see col. 6, lines 7-20.

Referring to claims 9-10, the first audiovisual presentation of Cosatto comprises a time-ordered sequence of video images digitized and encoded into an encoded digital signal, that comprises a plurality of Motion Picture Expert's Group motion vectors, wherein the correlation means is further responsive to at least a selected one of the plurality of MPEG motion vectors. See col. 53-56, which discusses how the facial parts are handled by a model for the MPEG4 subsystem.

Referring to claim 2, the first audiovisual presentation of Cosatto further comprises a video input signal. See col. 3, line 38 and col. 4, line 15.

Referring to claim 3, the video input signal of Cosatto is a time-ordered sequence of video images. See col. 6, line 66 - col. 7, line 3. Also, the animations of the video signal are time-ordered to match the audio track.

Referring to claims 4, 11, 27, and 38, the correlation means of Cosatto further comprises recognition means responsive to the video input signal, for recognizing at least a selected one reference object within at least a selected one video image (the first audiovisual presentation; encoded digital signal) of the time-ordered sequence. Col. 7, line 14 - col. 8, line 15 describes

Art Unit: 2173

the recognition system of Cosatto, including how facial features (selected reference objects) are located within the video.

Referring to claims 5, 12, and 28, the recognition means of Cosatto further recognizes at least one reference point on the associated reference object. See col. 7, lines 33-39.

Referring to claims 6, 29, and 39, the recognition means of Cosatto comprises image recognition means. See col. 7, line 14 - col. 8, line 15.

Referring to claims 7-8, the first audiovisual presentation of Cosatto further comprises reference object information that identifies and is associated with a selected one reference object. See col. 7, lines 40-61, which describe how reference object information (i.e. color and texture analysis, size and position - reference point) is associated with and identifies facial features (selected reference objects).

Referring to claims 13, 30, and 40, Cosatto discloses the correlation means further comprises first-order object transformation means for transforming at least a selected one recognized reference point responsive to the selected one of the plurality of MPEG motion vectors. See col. 13, lines 60-65 which discuss morphing (transforming) and col. 14, lines 53-66, which discusses how the facial parts are handled by a model for the MPEG4 subsystem.

Referring to claims 14-15, 31, and 41, the compositing means of Cosatto further comprises image transform means (i.e. morphing; col. 13, lines 60-65) for transforming the selected one replacement object image (facial feature) associated with the selected one reference object.

Referring to claims 16-18 and 32, the user audiovisual information of Cosatto further comprises user object geometric information. See col. 11, lines 5-7, which describe how the samples of facial features contain geometric information.

The correlating means of Cosatto further comprises recognition means for identifying a selected one reference object within the first audiovisual presentation (col. 7, lines 40-61) and the compositing means further comprises geometric transformation means for geometrically transforming the user object geometric information responsive to the recognition means. See col. 10, lines 37-53 and col. 13, lines 22-34.

The compositing means of Cosatto further comprises geometric transformation means for geometrically transforming the user object geometric information producing transformed user object geometric information, responsive to the selected one reference object. See col. 6, lines 7-20, where Cosatto acknowledges the ability the change the shape and orientation of objects.

Referring to claims 19-20, 33, and 43, the replacement object image of Cosatto comprises texture map image data representative of at least one selected user object as viewed from at least one predefined viewing position relative to the selected user object and the compositing means selects a portion of the texture map image data responsive to the correlation means. See col. 6, lines 7-12. Also, see col. 1, lines 62-64.

Referring to claims 21-22 and 34, the compositing means of Cosatto further comprises geometric transformation means for geometrically transforming the user object geometric information producing transformed user object geometric information, responsive to the selected one reference object. See col. 6, lines 7-20, where Cosatto acknowledges the ability the change the shape and orientation of objects.



The geometric transformation means of Cosatto further comprises mapping means for mapping the selected portion of the texture map image data onto the transformed user object geometric information producing a replacement object image. See col. 6, lines 7-20.

Referring to claims 23, 35, and 45, the user audiovisual information of Cosatto further comprises a time-ordered sequence of user images and the association means further selectively associates a plurality of the time-ordered sequence of user images each respectively with selected ones of the time-ordered sequence of video images (prior to the replacing). See col. 3, lines 44-60, which describe how the user images are selected to coincide with an audio track in a time-ordered sequence to provide realistic lip and head movements.

Referring to claims 24 and 36, the audiovisual presentation of Cosatto further comprises a time-ordered sequence of video masks, and the correlation means further comprises selection means for selecting a portion of the first audiovisual presentation responsive to at least a selected one of the video masks. See col. 15, lines 1-9.

Referring to claim 25, the selection means of Cosatto is further responsive to at least a selected one of the MPEG motion vectors. See col. 14, line 55.

Referring to claim 42, Cosatto discloses the replacement object further comprises user object geometric information that is transformed, producing transformed user object information, responsive to the recognition of at least one selected reference object within the first audiovisual presentation, prior to the replacing. See col. 6, lines 7-20, where Cosatto acknowledges the ability the change the shape and orientation of objects. Also, see col. 6, lines 38-45.

Referring to claim 44, the selected portion of the texture map of Cosatto is mapped onto transformed user object geometric information, prior to the replacing. See col. 6, lines 7-20.

Art Unit: 2173

*Conclusion*

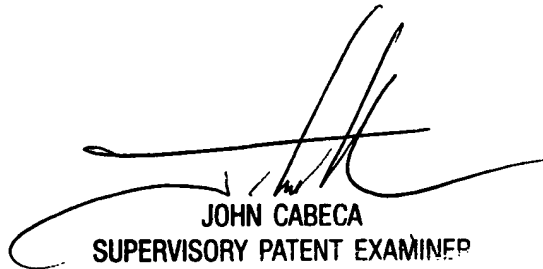
9. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach image substitution, such as changing clothing on models of users, changing faces on predefined characters or dolls and integrating real video data with virtual data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn M. Becker whose telephone number is 703-305-7756. The examiner can normally be reached on M-T 8:00 - 5:30 and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Cabeca can be reached on 703-305-3116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-745-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

smb  
May 28, 2003



JOHN CABECA  
SUPERVISORY PATENT EXAMINER  
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